Supply Chain Financing

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Main Ideas

• Procurement Organizations need to be better educated on SCF
• Supplier Development with SCF
• How SCF programs work
  – Funding
• Amount of variability in the Fintechs
• Accounting Treatment (Alcoa Case)
Supply Chain Flows

Product Flow

Financial Flow

Information Flow
Supply Chain Finance is:

1. Using the supply chain to fund the organization, and
2. Using the organization to fund the supply chain.
Fund the Growth

- Firms are looking to an efficient and effective supply chain to **fund the growth** of the company.

- Companies cannot only be dependent on revenues and financial management to **grow profit**.
Sources of Operating Capital: An Example

- Pricing
- SKU Rationalization
- Supply Chain Savings
- Mix Management
- Functional Savings
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**Reasons for Increases In Cash Holdings**

- **Inventories have fallen**
- **Capital expenditures have fallen**
- **Cash flow risk for firms has increased**
- **R&D expenditures have increased.**
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Supply Chain Finance
(Reverse Factoring)

Manufacturer

3PL

Transportation Provider
(Carrier)

Customer

Bank

Uses Manufacturer’s credit rating

3PL sells accounts receivable to bank and receives payment in less than 30 days

Pays in 30 days

Pays Immediately

Pays in 90 days

3PL sells accounts receivable to bank and receives payment in less than 30 days

Pays in 30 days

Uses Manufacturer’s credit rating
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**Timeline**

- 0 days: Bank pays the 3PL
- 30 days: 3PL pays the Transportation Carrier
- 60 days: Manufacturer pays the Bank
- 90 days: 3PL pays the Transportation Carrier
- Manufacturer pays the Bank
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Supplier can choose to receive payment as early as 2 days after the invoice has been approved. Aggregator agrees to SCF arrangement. Manufacturer uses credit rating and bundles receivables as DTC notes. Supplier can choose to receive payment as early as 2 days after the invoice has been approved. Or wait 90 days.
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Timeline

Day 0: Invoice sent to Manufacturer
Day 8: Invoice approved
Day x: Aggregator sells notes to bank(s)
Day 10: Aggregator sends money to supplier
Day 90: Aggregator sends money to bank(s)
Day 90: Manufacturer sends money to Aggregator

Delivery of product
Product received
Invoice sent to Manufacturer
Product received
# List of Largest Banks Active in SCF

<table>
<thead>
<tr>
<th>Bank Name</th>
<th>Description of Program</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank of America</td>
<td>One of the largest banks in the United States. In addition to SCF, they also offer</td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td>commercial credit card programs</td>
<td></td>
</tr>
<tr>
<td>Banco Santander</td>
<td>Offers a number of trade finance solutions to businesses.</td>
<td>Spain</td>
</tr>
<tr>
<td>BNP Paribas</td>
<td>Has specific expertise in Commodities and Receivables Finance.</td>
<td>France</td>
</tr>
<tr>
<td>Citigroup</td>
<td>One of the first and largest programs in the United States. They also offer commercial</td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td>credit card programs, among others, such as freight processing.</td>
<td></td>
</tr>
<tr>
<td>Deutsche Bank</td>
<td>Has specific expertise in Receivables and Distribution Finance</td>
<td>Germany</td>
</tr>
<tr>
<td>HSBC</td>
<td>One of the largest SCF programs globally</td>
<td>UK</td>
</tr>
<tr>
<td>JP Morgan Chase</td>
<td>One of the largest banks in the United States. In addition to SCF, they also offer</td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td>commercial credit card programs</td>
<td></td>
</tr>
<tr>
<td>Standard Chartered</td>
<td>Mostly specialized in working in developing economies, such as Africa, Asia, or the</td>
<td>UK</td>
</tr>
<tr>
<td></td>
<td>Middle East.</td>
<td></td>
</tr>
<tr>
<td>Sumitomo Mitsui Banking</td>
<td>One of largest Asian banks active in trade finance with expertise in Europe, Africa,</td>
<td>Japan</td>
</tr>
<tr>
<td>Corporation</td>
<td>Middle East, Asia Pacific, Latin America</td>
<td></td>
</tr>
</tbody>
</table>
# Fintech Firms

<table>
<thead>
<tr>
<th>Firm</th>
<th>Specialization</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ariba</td>
<td>Supply Chain Financing and Dynamic Discounting</td>
<td>Unit of SAP, that is providing a complete procure-to-pay capability</td>
</tr>
<tr>
<td>Baseware</td>
<td>Procure-to-Pay Platform</td>
<td>A Finnish software company selling enterprise software for financial processes, purchase to pay and financial management.</td>
</tr>
<tr>
<td>C2FO</td>
<td>Exchange-based Dynamic Discounting/early payment.</td>
<td>Similar concept to Priceline only for early payment of receivables. Target market is SME firms.</td>
</tr>
<tr>
<td>GT Nexus / Infor</td>
<td>Supply chain collaboration platform with some CF functionality.</td>
<td>Merged with TradeCard, another provider of Supply Chain Finance solutions. And it was recently acquired by Infor, a provider of cloud-based software for businesses.</td>
</tr>
<tr>
<td>Orbian</td>
<td>Supply Chain Financing</td>
<td>Early Fintech company that started originally as a JV between SAP and Citibank. They finance the purchases of the receivables with financial partners under Clearstream, Euroclear, and DTC note issuances under no-purchase agreement.</td>
</tr>
<tr>
<td>Prime Revenue</td>
<td>Supply Chain Financing and Dynamic Discounting</td>
<td>Technology platform that is widely considered to be the most robust. Their software can help analyze firm spend and provide a strategy to optimize payment terms based on multiple benchmarks and supplier characteristics. Technology includes payment terms optimization. Also, in addition to SCF can help firms do dynamic discounting.</td>
</tr>
<tr>
<td>Taulia</td>
<td>Supply Chain Financing and Dynamic Discounting</td>
<td>A procure-to-pay platform that is independent of ERP software firms or banks. They are able to provide flexible options for buyers and sellers.</td>
</tr>
<tr>
<td>Textura</td>
<td>Supply Chain Financing</td>
<td>Concentrates on the construction industry. Value proposition for general contractor is higher quality process.</td>
</tr>
<tr>
<td>Trax</td>
<td>Logistics transaction risk management and data refining.</td>
<td>Receives, standardizes, normalizes, and corrects logistics data, and general invoice risk data. They are able to provide an agreed upon risk score for each invoice, which can then be used to make decisions on credit terms.</td>
</tr>
</tbody>
</table>
# SCF Funders

<table>
<thead>
<tr>
<th>Name</th>
<th>Specialty</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advance Global Capital</td>
<td>Funding SMEs in the emerging markets throughout the world</td>
<td>UK</td>
</tr>
<tr>
<td>Apex Peak</td>
<td>Funding for SMEs throughout Singapore and in South Africa</td>
<td>Singapore</td>
</tr>
<tr>
<td>Greensill Capital</td>
<td>Principal investor group specializing in structured trade finance, working capital optimization, specialty financing and contract monetization</td>
<td>Australia, UK, and US</td>
</tr>
<tr>
<td>GemCorp</td>
<td>Investment Fund focused on emerging markets in Africa, Asia, and Europe across sectors and asset classes</td>
<td>UK</td>
</tr>
<tr>
<td>Propel</td>
<td>Provides Working Capital Solutions, such as Supplier Finance and Receivables finance to firms in African countries</td>
<td>South Africa</td>
</tr>
<tr>
<td>Tower Trade Group</td>
<td>Supply Chain Finance and IT services for companies in Ireland, South Africa, Spain, Switzerland, UK, and the US</td>
<td>Switzerland</td>
</tr>
</tbody>
</table>
Dynamic Discounting

- Offering of early payment discounts on approved invoices awaiting payment.
- Buyers have option of choosing an APR
- Supplier invoices discounted based on a sliding scale derived from the number of days supplier is paid early.

Types:
- Early Payments
- Extended Discount Term
- Dynamic Payment Terms (ASAP)
HOW DOES IT FIT WITH OTHER EARLY PAY PROGRAMS?
THEY COMPLEMENT EACH OTHER PERFECTLY

**SPEND LEVELS**

- Blue = SCF $50M+
- Green = C2FO everything in between
- Orange = P-Cards less than $1M

**Diagram Description**

- **Accounts Payable Value**
  - Buyer push
  - Buyer extends DPO
- **Supplier Size**
  - Larger
  - Smaller

**Chart**

- SCF
- C2FO
- Cards

- Supplier pull
- Buyer generates profit
TOGETHER THEY HELP ADDRESS ALL PARTS OF THE SUPPLY CHAIN
AND MAJORITY OF VALUE OPPORTUNITY IS IN MIDSECTION OF SPEND

Typical spend distribution of Fortune 500 company

Source: Bavelos Group, 2016

SCF
C2FO
Cards
E-Payables

- P-Card
- Virtual Card
- Ghost Card
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E-Payables – P-Cards

Buying Firm
Chief Purchasing Officer

Supplier Firm

Bank
Card Issuer

Processor
MasterCard
Visa

Bank

Retail
Commercial
Tie Cards
Co-Branding

Fraud
Security
Rebates
SCF vs. E-Payables

• SCF brings CPO and CFO together. The tension used to be on CPO focusing on price and CFO on working cap.
• SCF for core suppliers, large volume of money, frequent transactions.
• P-card (or virtual card) more for lots of SME suppliers.
SupplierPay Pledge

1. *Provide A Working Capital Solution to Our Small Business Suppliers:* We will take active steps to lower the working capital cost of small business suppliers through *either:*
   - Paying our small suppliers faster than we do today in order to reduce their capital needs.
   - Enabling a financing solution that helps small suppliers to access working capital at a lower cost.

2. *Share Best Practices:* Our pledge is a first step in a larger effort to strengthen supply chains and support small firms with the goal of driving impactful follow on action from the broader marketplace. To encourage wider support, we’ll highlight tangible outcomes for our own efforts, providing visibility into our actions and publicize key learnings in implementing this pledge.

3. *Implement a ‘Win-Win’ Solution:* We will implement this pledge in a manner that ensures our small suppliers are able to take advantage of our commitment while minimizing new administrative or operational burdens. We will define ‘small supplier’, and if we choose to offer these solutions to the entire supply chain we will continue to focus our efforts on the small suppliers that will benefit most. We will not use our pledge to offer financing solutions as a means of extending payment terms with our current small business supplier base.
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Average WC Required

Working Capital

Monthly Payments

Average WC Required

Weekly Payments
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Further Explanation

- http://financing.supply
Payments

- Check
- ACH
- VCA
- Wire Transfer
- FedWire

Purchase Requisition → Purchase Order
SCF vs. E-Payables

• SCF brings CPO and CFO together. The tension used to be on CPO focusing on price and CFO on working cap.
• SCF for core suppliers, large volume of money, frequent transactions.
• P-card (or virtual card) more for lots of SME suppliers.
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Cash Conversion Cycle

\[ \text{CCC} = \text{DSO} + \text{DIO} - \text{DPO} \]

- Days Sales Outstanding (DSO): the number of days needed to collect on sales.
- Days Inventory Outstanding (DIO): how many days it takes to sell the inventory.
- Days Payable Outstanding (DPO): the company's payment of its own bills.
Further Explanation

- http://financing.supply
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Funder Solutions

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<th>Working Capital Solutions</th>
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<tr>
<td>Accounts Receivable Finance</td>
</tr>
<tr>
<td>- Pooled or single name programs to fund ineligible receivables (e.g., foreign and large concentrations)</td>
</tr>
<tr>
<td>- Multi-year contract monetization of licenses, products, royalties or services</td>
</tr>
<tr>
<td>Accounts Payable Finance</td>
</tr>
<tr>
<td>- Supply Chain Finance offers early settlement to Suppliers in exchange for extended payment terms</td>
</tr>
<tr>
<td>- Re-invoicing service for the Buying company to pay the discount cost in return for rapid working capital improvement</td>
</tr>
<tr>
<td>Property Sale Leaseback</td>
</tr>
<tr>
<td>- Monetize underutilized physical assets</td>
</tr>
<tr>
<td>- Leverage new Capital Lease accounting treatment</td>
</tr>
</tbody>
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<table>
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<tr>
<th>Margin Improvement Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expedited Payment Program</td>
</tr>
<tr>
<td>- Suppliers are offered early settlement at their existing payment terms in return for a discount</td>
</tr>
<tr>
<td>- The Buying company obtains a share of the discount without the use of their cash or the shortening of their DPOs</td>
</tr>
<tr>
<td>Project Finance</td>
</tr>
<tr>
<td>- Purchase multi-year cash flows committed by the project off-taker</td>
</tr>
<tr>
<td>- Lowers the cost of the project and retains a larger portion of equity for the project sponsor</td>
</tr>
</tbody>
</table>

Notes:
- The liquidity for the programs is provided by Greensill Capital, the Buying company itself or a syndicate of investors arranged by Greensill Capital
- In many cases, the Buying company can treat the cash they apply to the programs as an investment and retain it on the balance sheet
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Cash Conversion Cycle

Apple
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Sources of Capital

- Equity
- Debt
- Cash
- Supply Chain/Operating Capital
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Sources of Operating Capital

- Pricing
- SKU Rationalization
- Functional Savings
- Supply Chain Savings
- Mix Management
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- Retail / Commercial Tie Cards Co-Branding
- Fraud Security Rebates

30 days after close of billing cycle (average of 45 days)

2 days after card has been processed

**Payment**

- Card Issuer
- Processor
- Merchant Acquirer

Goods/Services
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Transmitter: MasterCard, Visa, etc.

CITI Bank

Acquirer Bank (or other institution)

Risk Mgt.

Day 0

Buyer

20 BP

-200 BP

-200 BP

-250 BP

Day 45

Day 2

BP Profit

20 BP

80 BP

50 BP
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Diagram:
- **Bank**
  - Pays in 90 days
- **3PL**
  - 3PL sells accounts receivable to bank and receives payment in less than 30 days
- **Customer**
  - Pays in 30 days
- **Transportation Provider (Carrier)**
  - Pays in 30 days

Flow:
- **Product Flow** (→)
- **Financial Flow** (→→)

CAPS Research
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**SCF Provider**

- Agrees to SCF Arrangement
- Uses Buyers’ credit rating to assess risk
- Finance receivables
- Syndicate/Consortium of Banks
  - Bank
  - Bank
  - Funder

**Supplier**
- Can receive early payment of approved invoice
- Submit approved invoice
- Or wait 90 days

**Provider**
- Pays in 90 days

**Buyer**
- SCF Agreement
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**Procure-to-Pay**

1. Identify SKU / Supplier
2. Request Goods / Send PO
3. Receive Invoice
4. Approve Invoice
5. Receive Goods
6. Payment
7. Document Management / Analytics / Reporting
8. Accept Commercial Credit Card

**Fintech**

- Supply Chain Financing
- Dynamic Discounting

**Financing**

- Banks
- Specialized Providers
  - Pension Funds
  - Insurers
  - Mutual Funds
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![Graph showing the relationship between purchase volume and supplier size with dynamic discounting highlighted.](image_url)
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- Days Payable Outstanding (DPO): the company's payment of its own bills.
Sources of Data

• Income Statement:
  – Revenue
  – Cost of Goods Sold (COGS)

• Balance Sheet:
  – (Average) Accounts Receivable
  – (Average) Accounts Payable
  – (Average) Inventory

• The number of days in the period (year = 365 days, quarter = 90)
Days Sales Outstanding

(Average) Accounts Receivable/ Revenue per day

• Choices:
  – Accounts Receivable
  – AAR = (beginning AR + ending AR) / 2
  – Time average of AR
Days Inventory Outstanding

(Average) Inventory / COGS per day

• Choices:
  – Inventory
  – Average Inv. = (beginning Inv. + ending Inv.) / 2
  – Time average of Inventory
  – De-inflate COGS?
Days Payable Outstanding

(Average) Accounts Payable / COGS per day

• Choices:
  – Accounts Payable
  – AAP = (beginning AP + ending AP) / 2
  – Time average of AP
  – De-inflate COGS?